DOCUMENT RESUME

ED 060 877 LI 003 543

AUTHOR DeBuse, Raymond
TITLE Interlibrary Access Among the Worcester Area Cooperating Libraries: 1970-71. Part A: Interlibrary Loan and Shuttle.
INSTITUTION Worcester Area Cooperating Libraries, Mass.
PUB DATE Sep 71
NOTE 92p.; (0 References)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Interlibrary Loans; Libraries; *Library Circulation; *Library Collections; *Library Cooperation; Library Networks

ABSTRACT

The Worcester Area Cooperating Libraries is a system composed of public, academic and special libraries. In fiscal 1970-71, an expanded interlibrary loan service utilizing a daily shuttle between the participating libraries was implemented. This report describes and analyzes the interlibrary shuttle service, and presents an analysis of the statistics compiled by each of the libraries. The results of a survey designed to show the specific pattern of interlibrary lending and borrowing by each institution as well as the use of the shuttle are reported. The report recommends future changes and extensions for improvement of the service. (SJ)

ED 060877

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

INTERLIBRARY ACCESS AMONG THE WORCESTER AREA COOPERATING LIBRARIES: 1970-71.

PART A: INTERLIBRARY LOAN AND SHUTTLE.

Raymond DeBuse

Worcester Area Cooperating Libraries

Worcester, Massachusetts

September, 1971

LI 003 543

92p.
0

TABLE OF CONTENTS

Introduction. 1

Part A

I. Preliminary Remarks. 4

II. Interlibrary Shuttle 6

III. Gross ILL Activity of WACL Libraries 21

IV. Interlibrary Loan Survey 35
1. Lending. 38
2. Borrowing. 44
3. Shuttle Returns. 51
4. Overall Network Activity 56

V. Conclusions. 64

VI. Recommendations. 67

VII. Appendices
1. Worcester Area Cooperating Libraries . . .70
2. WACL Interlibrary Loan Policy. 73
3. American Antiquarian Society Policy. . . .77
4. Survey Forms 79
a. Lending. 80
b. Borrowing. 82
c. Shuttle Returns. 84
5. Revised ILL Survey Form. 86

LIST OF TABLES

II-A. Total materials carried on the shuttle, 1970-71 . 11

II-B. Loans delivered via shuttle, 1970-71. 11

II-C. Loans delivered via shuttle by individual library, 1970-71. 12

II-D. Shuttle service staff time and mileage, 1970-71 . 15

II-E. Gross costs of WACL shuttle operation, 1970-71. . 15

II-F. Unit costs of shuttle operation, 1970-71. 16

III-A. WACL ILL activity 23

III-B. WACL ILL activity (excluding all Public Library data) 24

III-C. WACL ILL borrowing activity (excluding Public Library borrowing for Regional System). 24

III-D. Loan activity by institution. 25

III-E. Borrowing activity by institution 27

III-F. Percentage of each institution's ILL activity with other WACL members 30

III-G. Rankings of WACL libraries by total loan activity, 1970-71 32

III-H. Rankings of WACL libraries by total borrowing activity, 1970-71 33

IV-A. Total loan activity of WACL libraries during the survey period 39

IV-B. Local loan activity 39

IV-C. Materials loaned during the survey. 41

IV-D. Individual library lending. 43

IV-E. Total borrowing during the survey period. 46

IV-F. Borrowing activity by institution 47

IV-G. Borrowing activity by institution, continued. . . 49

IV-H. Shuttle activity during survey period, from shuttle records 53

IV-J. Shuttle activity from survey results. 53

IV-K. Shuttle returns by institution. 54

IV-L. Institutional consortium activity from survey results 57

IV-M. Institutional consortium activity from 1970-71 annual statistics 58

IV-N. Dependency upon WACL ILL network. 60

IV-O. Dependency upon shuttle 61

INTRODUCTION

One of the primary objectives of the Worcester Area Cooperating Libraries is to make more effective use of the local library resources by facilitating the sharing of these resources. If satisfactory means of carrying out such sharing can be developed and implemented, not only would the breadth of service offered by each institution be broadened, but the potential would then exist for eliminating the duplication of expensive, little-used materials. Some of the funds thus saved could then be utilized by the individual libraries to purchase in greater depth in their particular areas of subject speciality, further increasing the scope of the area resources.

This consideration is particularly applicable to the Worcester group, since the member libraries vary considerably in major subject areas. One library is devoted entirely to American history and bibliography, while another contains a research collection on human biology. There is a public library as well as a number of college and university libraries, including those of a community college, several junior colleges, a medical school, an engineering school, and

a number of four-year liberal arts institutions. Total resources amount to approximately two million volumes. (See Appendix I)

Utilization of materials in a library collection requires both intellectual and physical access. The former is accomplished through the use of catalogs and indexes, or through the assistance of a reference librarian. In the case of inter-institutional access, union catalogs and lists and mail, telephone, or teletype communication between reference and/or circulation departments is necessary. Physical access in its simplest form involves a user or staff member going to an indicated location and retrieving the desired material. Inter-institutional sharing of materials requires further that it be transported to the requesting library, or that it be otherwise made conveniently available to the user of that library who needs it. There are a variety of means for accomplishing this: traditional interlibrary loan using the mails, interlibrary loan using a special delivery service, a union borrowing scheme, increased photoduplication facilities, and electronic transmission via digital, telefacsimile, or video links.

During the 1970-71 fiscal year the Worcester Area Cooperating Libraries implemented two projects designed to improve the effectiveness of interlibrary access, intellectual

and physical, among the member institutions; a new, on-going Worcester Area Union List of Serials and an expanded inter-library loan service utilizing a daily shuttle between the participating libraries. Both are considered to be successes by the members. This report will describe and analyze these two undertakings: Part A, immediately following, deals with the ILL Project; Part B, to be issued separately, will treat the Union List.

PART A

Interlibrary Loan

I. Preliminary Remarks

A plan to institute a daily interlibrary shuttle service to facilitate local interlibrary loans was formally proposed by WACL during the 1969-70 academic year, after earlier discussions of the concept. The proposal was presented to the Bureau of Library Extension of the Massachusetts Department of Education for funding under the Federal Library Services and Construction Act, Title III. Funding was granted for the 1970-71 fiscal year, in the amount of $2,200, to be administered by the Worcester Consortium for Higher Education, Inc., WACL's parent organization. The Dinand Library of Holy Cross College agreed to coordinate the operation.

A driver and car were hired and the service began on October 13, 1970. It operated until the end of the academic year five days a week, at a total cost very near to what had been budgetted.

The first substantive section of the Report (Section II) deals with the shuttle operation itself, the volume and types of materials carried, and the costs of carrying them. The raw data presented in the statistical summaries was

drawn from the log book kept at the coordinating office at Holy Cross and from the fiscal records maintained in the Consortium Office.

Next is presented an analysis of interlibrary loan statistics as reported by the WACL libraries for the past three years (Section III). Here the impact of the shuttle is viewed within the context of the total ILL activity of the members.

Finally, the results of a two-week survey of ILL operations conducted in late April and early May of 1971 are presented (Section IV). This survey, the first of several, was designed to show the specific patterns of ILL lending and borrowing by each institution as well as the use of the shuttle.

The last two sections (V and VI) contain a summary of the conclusions reached in the preceeding three sections, and recommendations for future changes and extensions of service in the ILL and shuttle activities of WACL members.

II. Interlibrary Shuttle

The concept of a library book shuttle service seemed particularly suited to the Worcester area because the 14 members of WACL all lie within a seven mile radius of the center of the city. Most are much closer. Furthermore, many of the libraries have special subject collections not duplicated by any of the others, but which, in this age of cross-disciplinary studies, could be of great use to users at some of the other institutions. To some members a union borrowing card appeared to be the answer, but this would involve technical and economic considerations that the group felt it could not handle as a voluntary association without, at that time, a paid staff. Nor was everyone convinced that a union card was the answer. The shuttle was seen as a somewhat more cautious yet possibly quite effective means of increasing the interlibrary sharing of materials.

The Worcester libraries had always borrowed from one another through standard ILL procedures, with the exception that frequently the user himself (which included undergraduates) had been allowed to carry the ILL form that had been filled out at his library to the library owning the item he wished to borrow, where he could then pick the item up himself. It was hoped that the shuttle would speed up delivery enough that such trips by the users would not normally be

necessary.

Thus, when funding became available for the 1970-71 academic year, a retired baking company employee was hired part-time as the shuttle driver. He furnished his own car and was paid wages, mileage on the car, and the cost of the extra insurance that was required for the car. The service began operation on October 13, soon after the autumn semester began.

It operated Monday through Friday whenever the academic libraries were open (except during the Christmas recess period) until May 28, for a total of 31 weeks (147 days) of actual operation. Each day's route varied according to the demands of the day. If a library had an item to be delivered, that library was to call the Shuttle Coordinator at Holy Cross. Libraries which had not called, or were not indicated as destinations by a library that had called, were by-passed that day. Some libraries would be visited twice in a day, but extensive doubling back was discouraged so that occasionally materials picked up one day would be held over for delivery the next day. The average mileage per week was about 190.

Materials other than books being borrowed or returned on ILL were also carried. The ILL forms themselves were delivered, sometimes after the material being borrowed had

already been picked up, the arrangements having been made between the two libraries involved over the phone. This practice reduced the number of stops that had to be made, since the forms were often delivered on the next day's trip.

Books not borrowed through interlibrary loan, but left at another library, were delivered to the proper library on the shuttle, and administrative memoes and even some supplies were carried. A total of 4,361 separate items were carried during the 147 days on which the shuttle operated.

After the first month of operation it became apparent that a detailed, written local ILL policy and procedure statement would have to be prepared. A number of minor difficulties and misunderstandings had occurred because of the lack of such a statement. At about the same time the shuttle went into service a full-time library systems analyst took up his duties with WACL, and one of his first tasks was to enunciate such a policy. The final draft was approved by the WACL membership at its January meeting (see Appendix II). A handbook of WACL ILL information was later issued. This included the above statement and specific information about the individual policies of each library with regard to individual types of material, hours that ILL can be transacted, etc.

Time and mileage figures for each day of operation were

kept at Holy Cross, where the day's transactions were recorded on a log book as well. A monthly statistical summary of loaned materials that were carried was prepared and distributed to the membership by the shuttle coordinator. Both these summaries and the log book itself were used in preparing the analysis that follows.

The log book proved to be a difficult means of maintaining accurate records, for a variety of reasons. Catagories were not specified, and the resulting ambiguities makes interpretation of individual entries sometimes difficult. Such ambiguities are often the result of inadequate reporting by the library (or libraries) involved in a transaction. In the future each library will be asked to fill out a weekly shuttle report form, a procedure that should produce more accurate records.

The problems are not so great as to invalidate any attempt to analyze the statistics and to draw conclusions from such an analysis. For one two-week period we do have an independant cross-check upon the accuracy of the shuttle figures, and the variation during that period is quite small.

Turning to the statistics themselves then, we see in Table II-A a breakdown of the various types of materials carried and the totals of each for the 31 weeks the

shuttle operated. It is immediately apparent from the weekly averages shown, that the shuttle was not overburdened. However, at least for loans, the volume did increase as the year progressed (Tables II-B and II-C). The extent of shuttle use by each library for delivering loans (Table II-C) corresponds very closely to that library's total ILL activity (see Section III of the report), with the exception of the Public Library, which makes the majority of its loans to the libraries of the Central Massachusetts Regional Library System, of which it is the Regional Center Library. These other public libraries do not participate in the shuttle. Note that three libraries, Clark, Holy Cross, and the Worcester Public account for over 1,000 of the 1,300 loans, with Clark supplying 43% of the total. Predictably, the smaller libraries furnished very few materials to the other institutions.

Comparing the number of loans that went via the shuttle with the total intra-WACL lending for the year (including periods when the shuttle was not operating) we find that 64%, or 1,300 out of a total of 2,004 (see Section III) went by shuttle. Most of the rest were presumably picked up in person, since the mails were seldom used. Shuttle delivery of requested items was normally made to the borrowing library within 24 hours of the time the request had been accepted

	Number	Average/week
1. Library Materials	2803	90
a) Books	2335	75
b) Books (cartons)	3	--
c) Photocopy sets	216	7
d) Other	249	8
2. ILL forms	1469	47
3. Misc.	89	2
Total	4361	140

Table II-A. Materials carried on the WACL shuttle during its 31 weeks of operation, 1970-71.

Autumn (14 weeks)		Spring (17 weeks)		Year	
Number	Av. /week	Number	Av. /week	Number	Av. /week
494	35.3	806	47.4	1300	41.9

Table II-B. Loans (volumes) delivered via the WACL shuttle, 1970-71. Includes non-book titles.

	October	November	December	January	February	March	April	May	Total per library
Amer Antiq	0	1	0	0	0	0	0	2	3
Anna Maria	2	1	0	0	3	3	8	0	17
Assumption	6	3	12	11	7	10	13	8	70
Becker	0	0	0	0	0	1	11	3	15
Clark	43	66	46	70	72	103	105	58	563
Holy Cross	22	49	24	18	41	56	53	46	309
Leicester	0	0	0	0	0	0	4	5	9
Quinsig	0	0	0	0	0	1	1	1	3
Worc State	0	6	0	7	4	8	9	2	36
UMass Med	0	1	10	0	0	0	2	1	14
Worc Fndtn	2	1	1	3	2	5	3	1	18

(continued on next page)

Worc Jr	2	0	0	0	0	5	1	0	8
WPI	13	8	14	3	6	11	6	12	73
Worc Pub	15	16	13	10	19	31	39	19	162
Total	105	152	120	122	154	234	255	158	1300

Table II-C. Loans (volumes) delivered via the WACL shuttle, 1970-71: Breakdown by library. Note: The service did not begin until Oct. 13, and it did not operate during the two-week academic recess at Christmas.

from the user, with same-day delivery being not unusual. (The shuttle left Holy Cross at 9:30 A.M., and normally was back by noon, so that same day service required an early request.)

Moving to the cost of the service, we see in Table II-D the staff time devoted to the shuttle operation and the number of miles driven, with weekly averages. Table II-E shows the gross costs of these categories, again with weekly averages. The total cost of the operation was $2083.76, very close to the $2200 that had been budgetted.

Table II-F gives the unit costs of carrying materials on the shuttle. For all materials carried (including administrative memoes, etc.) the cost per item was $.48. If we allocate the entire cost of the operation only to the library materials that were being loaned or returned (or otherwise being transported between libraries) the cost per item rises to $.74. If we go one step further, and spread the entire cost over only the loans that were transacted via the shuttle, the unit cost rises to $1.61.

This may seem high, but let us compare it with an estimated cost for sending items via the mails. We have at this point no exact data on the cost of using the mail; however, Diana Johnson of the Reference Department of the Gordon Library, Worcester Polytechnic Institute, has made

	Fall (14 weeks)		Spring (17 weeks)		Year (31 weeks)	
	Total	Av./week	Total	Av./week	Total	Av./week
1. Driver time	159.75	12.12	252.75	14.87	412.5	13.3
2. Coordinator time	65	4.64	83	4.88	148	4.7
3. Mileage	2077	148.3	3203	188.4	5280	170.3

Table II-D. Total shuttle service staff time and route mileage, 1970-71.

	Fall (14 weeks)		Spring (17 weeks)		Year (31 weeks)	
	Total	Av./week	Total	Av./week	Total	Av./week
1. Driver wages	$339.50	$24.25	$505.50	$29.74	$845.00	$27.20
2. Base operation	260.00	18.57	332.00	19.52	592.00	19.10
3. Mileage	207.70	14.83	320.30	18.84	528.00	17.03
4. Insurance	-----	-----	-----	-----	118.76	3.83
All	$807.20	$57.65	$1157.80	$68.10	$2083.76	$67.16

Table II-E. Gross costs of WACL shuttle operation, 1970-71.

Type of Material	Number of Items	Unit Cost for Transportation	Unit Cost for Base Operation	Total Unit Cost
1. All material	4361	$.35	$.13	$.48
2. Library material	2803	.53	.21	.74
3. Loans	1295	1.15	.46	1.61

Table II-F. Unit costs of shuttle operation, 1970-71. Note: Transportation costs include driver's wages, mileage payments, and insurance.

the following estimates for loans made by the Gordon Library:

Packaging (materials and labor):	$ .75
Postage and insurance:	.35
Delivery to Post Office:	1.00
	$2.10

This figure is appreciably higher than the $1.61 figured for the shuttle. Furthermore, the mails give 24-hour service much less frequently.

Some may argue that the estimate of the cost of delivery to the post office is too high. If we reduce that by 50%, the cost for mail service is still $1.60, almost the exact cost figured for the shuttle.

These figures show the shuttle in an unfavorable light, however, for the $1.61 unit cost for shuttle delivery includes the cost of <u>returning</u> the material. To allow for the costs of both sending and returning items via the mails, Mrs. Johnson's estimate would have to be doubled to $4.20 (or $3.20 if we use the lower cost of delivery to the post office). Thus the shuttle is clearly cheaper than the mails by a factor of at least 2 : 1, if we accept the W.P.I. estimates.

Turning to overall cost comparisons for all library materials delivered by shuttle (2803 items), using the

lower estimate for Postal delivery, we find that it would have cost $4484.80 to have sent these materials in the mail. Actually, 216 items out of the total were photocopies, which, for postage, packaging, and handling may have cost $ .50 per unit rather than the $1.60. Our total for using the mails would then be reduced to $4247.20. This compares to a total shuttle cost of $2083.76, and a net savings over postal service delivery of $2163.44. Much of this is a <u>real</u> savings for 1970-71, since total ILL activity remained constant before and after the introduction of the shuttle (see Section III, below). The existance of the shuttle did not stimulate a greater reliance upon ILL borrowing. However, as we shall see later, it did stimulate a greater reliance upon borrowing from local resources. Thus, part of the savings indicated above were realized by non-WACL libraries, those from which materials would have been borrowed had they not been borrowed within WACL. Another portion of this savings was realized by those users who, without the shuttle, would have picked up directly the materials they were borrowing from another library through ILL. (What percentage of users would have done this is unknown, and, of course, their cost certainly would have been lower than the cost of sending the materials in the mails. This is the reason we cannot say that

all of the calculated savings of $2163.44 was real.) A substantial part of the savings did accrue to the WACL libraries, however.

Thus, the shuttle, in addition to being more effective from the standpoint of service, is also more economical than mail service. Furthermore, there is a linear relationship between the number of items and the cost of sending them in the mail, while shuttle costs decline per unit as the volume of materials handled increases, thus further increasing the net savings, savings of funds that can then be applied toward satisfying other pressing library needs.

Although an economic success, the shuttle was not without problems. Scheduling of runs was often difficult because frequently the coordinating office would not be informed of all destination libraries. This led to a great deal of doubling back, which was not normally to be allowed under the formal shuttle policy. After the policy went into effect, the amount of this did decrease significantly. For some libraries the lack of a weekend delivery was an inconvenience. Perhaps more serious, however, is the fact that there was no backup driver or car if something should happen to keep the regular driver or his car from making a day's deliveries. Inadequate record keeping has already

been mentioned as a problem; another was inadequate publicity. Many are convinced that the shuttle could have been used a great deal more if it's existence had been advertised more boldly. Finally, the use of a passenger car made it very difficult to make heavy deliveries.

None of these problems was so serious as to cripple the operation, however. By all standards it was a success.

III. Gross ILL Activity of WACL Libraries

As part of the original feasibility study of the proposed shuttle service, figures representing the amount of intra-WACL ILL activity, by individual library, for the 1968-69 academic year were collected. In June of this year comparable figures reflecting activity both among WACL members and with outside libraries were collected for 1969-70 and 1970-71. All libraries in the group, which is now larger than it was in 1968-69, responded with whatever appropriate data was available. The most serious lack is for the Worcester Public Library, where there are no records indicating the number of items borrowed from WACL member libraries. Worcester State College could not supply information on lending or borrowing within WACL for 1969-70. In addition, Becker and Leicester Junior Colleges had no records at all for that year. Neither of these institutions were members in 1968-69, so that any ILL transactions by either are not reflected in the totals for that year as well. Worcester Foundation data is also lacking for 1968-69. Finally, the University of Massachusetts Medical School did not begin operation until the 1970-71 academic year, so that there was no earlier ILL activity for the library there. This last case,

of course, is not a gap. Most of the omissions together probably constitute only a very small percentage of the total area activity in each category, so that the analysis does not suffer a great deal because of them.

The American Antiquarian Society is a minimal participant in the interlibrary lending arrangement because of a fairly restrictive lending policy (see Appendix III). Most of the material it does supply is in the form of photocopies.

The data that was collected has been organized into six tables. The first, Table III-A, shows total WACL ILL activity for each of the three years with which we are concerned, including the borrowing done by Worcester Public for the libraries of the Central Regional System. This data is broken down by individual library in Tables III-D and E, which show that the drop in total activity between WACL libraries and all other libraries between 1967-70 and 1970-71 was due largely to decreased Public Library activity with the libraries of the Regional System. Table III-B shows the ILL activity when all Public Library transactions are omitted. Table III-C, for borrowing only, excludes the Public Library transactions with the Regional System libraries.

We see in these latter two tables that the number of

	1968-69	1969-70		1970-71	
	number of trans.	number of trans.	percent increase	number of trans.	percent increase
A. Loaned					
1) To WACL libraries	878	1,114	27	2,004	80
2) To all libraries	NA	11,374	----	9,106	-25
B. Borrowed					
1) From WACL libraries*	693	1,077	55	1,935	79
2) From all libraries	NA	16,766	----	11,617	-44

Table III-A. WACL ILL activity.

NA -- not available

* -- Public Library data not available

	1968-69	1969-70		1970-71	
	number of trans.	number of trans	percent increase	number of trans	percent increase
A. Loaned					
1) To WACL libraries	850	1,071	26	1,856	73
2) To all libraries	NA	3,088	----	3,177	2
B. Borrowed					
1) From WACL libraries	633	1,077	70	1,935	80
2) From all libraries	NA	4,005	----	4,067	1

Table III-B. WACL ILL activity (excluding all Public Library data).

NA -- not available

	1969-70	1970-71	
	number of trans.	number of trans	percent increase
1) From WACL libraries*	1,077	1,935	80
2) From all libraries	4,262	4,322	1

Table III-C. WACL ILL Borrowing Activity (excluding Public Library borrowing for Regional System).

* -- Public Library data not available

	1968-69		1969-70				1970-71			
	WACL		WACL		Total		WACL		Total	
	Number	Percent of total	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Amer Antiq	0	0	2	0	375	3	1	0	139	2
Anna Maria	0	0	4	0	4	0	10	.2	10	0
Assumption	149	17	140	13	161	1	83	4	92	1
Becker	*	*	NA	NA	NA	NA	10	.2	10	0
Clark	387	44	688	61	1,316	12	1,141	57	1,651	18
Holy Cross	253	29	136	12	330	3	357	18	600	7
Leicester	*	*	NA	NA	NA	NA	4	.2	4	0
UMass Med	**	**	**	**	**	**	12	1	24	0
Quinsig	0	0	1	0	1	0	3	.1	3	0
Worc Fndtn	NA	NA	38	4	700	6	44	2	312	4
WPI	47	5.3	60	6	180	2	65	3	200	2

(continued on next page)

Worc Jr.	3	.3	2	0	2	0	7	.3	7	0
Worc Pub	28	3.2	43	4	8,286	73	148	8.	5,929	65
Worc State	11	1.2	NA	NA	19	0	119	6	125	1
Total	878	100	1,114	100	11,375	100	2,004	100	9,106	100

Table III-D. Loan Activity by Institution. Percentages represent each institution's portion of the total loan transactions within the indicated category (WACL or total).

NA -- not available

* -- not WACL members

** -- Library not yet in operation

	1968-69		1969-70				1970-71			
	WACL		WACL		Total		WACL		Total	
	Number	Percent of total	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Amer Antiq	0	0	0	0	0	0	1	0	1	0
Anna Maria	45	6	34	3	34	.3	79	4	79	1
Assumption	67	10	240	22	330	2	380	20	406	3
Becker	*	*	NA	NA	NA	NA	44	2	49	.5
Clark	100	14	119	11	930	6	279	14	1,112	9
Holy Cross	194	28	224	21	466	3	351	18	579	5
Leicester	*	*	NA	NA	NA	NA	96	5	96	1
UMass Med	**	**	**	**	**	**	18	1	180	2
Quinsig	67	10	68	6	70	.4	48	2	48	.5
Worc Fndtn	NA	NA	27	3	1,205	7	16	1	297	2
WPI	74	11	328	31	569	3	416	22	701	7

(continued on next page)

Worc Jr	14	2	37	3	37	.3	67	4	72	1
Worc Pub										
a)Local	60	9	NA	NA	257	2	NA	NA	255	2
b)Region	NA	NA	NA	NA	12,504	75	NA	NA	7,295	64
Worc State	72	10	NA	NA	107	1	140	7	193	2
Total	693	100	1,077	100	16,509	100	1,935	100	11,363	100

Table III-E. Borrowing Activity by Institution. Percentages represent each institution's portion of the total borrowing transactions within each category (WACL and Total).

NA -- not available

* -- not WACL members

** -- Library not yet in operation

ILL transactions between WACL libraries has increased each year with a very large increase (80% for borrowing, 73% for lending) in 1970-71. Yet the total number of transactions with all libraries has hardly increased at all (1% for borrowing, 2% for lending), at least during the two years for which we have that data.

To amplify this fact further, we show the percentages of each individual institution's borrowing and lending that was done with other WACL members for those two years. Of the libraries for which we can calculate this percentage, only one shows a decrease in either category between the two years. Considering the overall (but excluding the Public Library data) figures, the percentage of lending that was to other WACL members rose from 34% in 69-70 to 58% in 70-71, and that of borrowing increased from 28% to 50%, nearly a two-fold increase!

It is probably safe to assume that a major factor in this change in the pattern of ILL activity has been the introduction of the daily book shuttle. The shuttle has not only made it easier and faster for the librarian to obtain needed materials locally through ILL, but its existence has drawn greater attention to the possibility of filling a request locally.

The shuttle would thus seem to be helping to over-

	1969-70		1970-71	
	lending	borrowing	lending	borrowing
Amer Antiq	.5	no borrowing	.7	100
Anna Maria	100	100	100	100
Assumption	87	72	90	93
Becker	NA	NA	100	90
Clark	52	13	69	25
Holy Cross	41	48	59	60
Leicester	NA	NA	100	100
UMass Med	*	*	50	10
Quinsig	100	97	100	100
Worc Fndtn	5	2	14	5
WPI	33	57	33	59
Worc Jr	100	100	100	93
Worc Pub	.5	NA	2	NA
Worc State	NA	NA	95	72
All	9	6	27	17
All(except Pub Lib)	34	28	58	50

Table III-F. Percentage of each institution's ILL activity that is transacted with other WACL members.

NA -- not available

* -- Library not yet in operation

come the classic problem of ILL: The library from which a title is requested is often a large, perhaps relatively distant library that is more likely to own the title than are smaller, local libraries. The savings in time and bother that the shuttle provides apparently compensates for the effort needed to locate desired titles within the Worcester area.

This is not to say that the same phenomenon does not operate locally. The Goddard Library at Clark University filled over half of all of the intra-WACL loans during the 70-71 academic year, obviously because it has a strong, relatively large collection. During the next year we hope to sample the Clark loans and determine what percentage could have been filled at another WACL library.

However, it is not all as one-sided as it might appear, for Clark is also a heavy borrower, although not locally to the extent that it loans. Tables III-G and III-H show the rankings of the institutions, first by the total number of interlibrary loans made during 70-71, then by the total number of interlibrary borrowing transactions carried out that year. Note that there is a significant correspondence between the two rankings. This is probably in part due to the fact that the larger libraries, which in general rank higher, serve larger clienteles. The

Library	Items Loaned
1. Worc Pub	5,929
2. Clark	1,651
3. Holy Cross	600
4. Worc Fndtn	312
5. WPI	200
6. Amer Antiq	139
7. Worc State	125
8. Assumption	92
9. UMass Med	24
10. Anna Maria	10
Becker	
11. Worc Jr	7
12. Leicester	4
13. Quinsig	3

Table III-G. Rankings of WACL libraries by total amount of loan activity, 1970-71.

Library	Items borrowed
1. Worc Pub	7,850
2. Clark	1,112
3. WPI	701
4. Holy Cross	579
5. Assumption	406
6. Worc Fndtn	297
7. Worc State	193
8. UMass Med	180
9. Leicester	96
10. Anna Maria	79
11. Worc Jr	72
12. Becker	49
13. Quinsig	48
14. Amer Antiq	1

Table III-H. Rankings of WACL libraries by total amount of borrowing activity, 1970-71.

existence of graduate programs might have a similar effect, as might an emphasis upon faculty research, although as we shall see later, faculty and graduate student use of ILL is not particularly heavy. Another possibility is that curriculum development at the larger schools may have outstripped collection development more so than in the smaller schools, thereby increasing the reliance at the former upon external resources. In any event, the data shows that he who gives also takes.

IV. Interlibrary Loan Survey

Two one-week surveys of ILL activity within the WACL libraries were planned for the spring of 1971. Due to other demands on the library analyst's time during the period of planning, it became impossible to make the first survey any earlier than the last week of April. Since the school year effectively ends in mid-May for many of the participating institutions it was decided to extend the survey to two-weeks and not to make a second, separate survey at that time.

Three separate questionaire forms were prepared, one to be filled out for each title borrowed through ILL by the reporting library, the second for each title loaned through ILL, and the third for each title returned to another library via the shuttle. Unsatisfied telephone requests were not recorded both because the purpose of the survey was primarily to document the actual movement of library materials, and because, at Clark and the Worcester Public Libraries, filling out a form for each search would have caused an intolerable drain on staff time. During the next year a sampling of telephone ILL requests will be made to fill this gap in the data.

The forms were designed to be as simple as possible, requiring the least amount of time to fill out and yet still contain the required information. Some of the finer points

of questionnaire design were thus ignored. Prior testing of the forms was inadequate, due to time limitations, and a few ambiguities did turn up. The number of people filling out the forms was limited, however, and could be reached personally. Furthermore, the analyst was available if problems arose. Thus personal attention compensated for most of the admitted inadequacies of the forms. (On the basis of the experience obtained in this first survey, the three forms have been combined into a single form for future surveys.)

All ILL transactions that originated during the survey period were to be recorded on the appropriate forms. This included all of the Public Library transactions with the Central Massachusetts Regional Library System libraries.

Of course interlibrary loan is not the sole means of physical interlibrary access. There is also some direct borrowing. Faculty members have borrowing privileges at libraries other than their own, and in the case of the three state institutions, all residents of the state have access to the library collections. Direct borrowing at the Public Library is also open to any resident of the state. In addition, a cross-registered student is normally allowed full use of the library at the institution

where he is cross-registered. Finally, the Antiquarian Society will provide photocopies of material directly to anyone who needs the materials and will pay the cost. Therefore, there is most likely a significant amount of borrowing from WACL libraries by persons who are primarily "affiliated" with another WACL library in addition to the formal ILL traffic surveyed here.

Because of the fact that term papers were coming due at many of the institutions, ILL activity was higher during the survey period than normal. One exception was at Becker Junior College, where term papers were due in the week before the survey started. This fact may have caused some distortion in Becker's rankings in the survey from what they would have been had the survey been taken a week or two earlier.

Even though there was on the whole greater activity during the survey period, the number of transactions recorded by the survey in institutions that have little ILL activity normally was quite small, and do not allow significant conclusions to be drawn about the distribution of an individual, small library's ILL activity. This should be kept in mind when the various tabular data is being considered, and if a more valid picture of these libraries' profile is desired, the data here should be

considered together with that of Section II and III above.

1. Lending

A total of 492 separate titles were lent during the survey period, slightly over half of them to other WACL libraries. Table IV-A shows the number and percentage of the total for each of several types of loans. Table IV-B gives the breakdown between loans to other WACL libraries delivered by shuttle and those picked up directly by the borrower from the other WACL institution. The figures show that, since 51% of all loans recorded during the survey to WACL libraries went by shuttle, 29% of all loans made during this period were carried on the shuttle. This is exactly the percentage obtained from the data reported above (Section II) for the entire year.

Table IV-C shows the breakdown by type of material involved. These figures include instances in which photocopies were supplied to the borrowing library rather than the original itself. Books constitute a clear majority of all items loaned and an even greater majority of those items that were loaned within WACL.

We turn now to figures relating to the individual libraries. Table IV-D shows a variety of tabulations for different categories and percentages for each library

	Number of trans.	Percentage of total
1. Total Filled Requests	492	100
a) By non-WACL libraries	232	47
b) By WACL libraries	260	53
2. Photocopy Requests	93	19
3. Renewals	0	0

Table IV-A. Total loan activity of WACL libraries during the survey period.

	Number of trans.	Percentage of total WACL loans
1. Direct ILL	127	49
2. Shuttle	133	51

Table IV-B. Local loan activity.

within those categories. Thus we see that, of requests filled for WACL libraries, Clark University was the source of over half of the items loaned, and Clark and Holy Cross together account for three quarters of the total. As would be expected (because of its lending to the Regional System libraries), the Public Library accounts for a large majority (76%) of all items loaned outside of WACL. However, it is surprising that, with the exception of the Worcester Foundation, no other library did any significant lending to non-WACL libraries during the survey period. This is possibly due to the fact that near the end of a semester time is more critical and students may borrow less from non-local libraries.

Ninety-three of the 492 items lent were actually photocopies, supplied for a nominal copying fee. Two-thirds of the photocopies were made at the Worcester Foundation; Clark and the Worcester Public each supplied about 8% of the total. No other library filled over two or three photocopy requests. The average number of exposures was nine.

Eighty-nine items were allowed to be picked up for shuttle delivery before the ILL request forms had been received, a measure taken to speed service. There were no renewals recorded during the survey period, although

	To all Libraries		To WACL Libraries		Percentage of total(s) to WACL Libraries
	Number	Percent	Number	Percent	
1. Books	379	77	207	80	54
2. Bound Periodicals	79	16	35	13	44
3. Unbound Periodicals	20	4	5	2	25
4. Microform	0	0	0	0	0
5. Other	14	3	13	5	93
Total	492	100	260	100	53

Table IV-C. Materials loaned during the survey.

	Total requests filled	Requests filled for WACL libraries		Requests filled for non-WACL libraries		Direct ILL		Shuttle		Photocopies	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Amer Antiq	3	0	0	3	1	0	0	0	0	3	3
Anna Maria	1	1	0	0	0	0	0	1	1	0	0
Assumption	10	10	4	0	0	2	2	8	6	1	1
Becker	1	1	0	0	0	0	0	1	1	0	0
Clark	146	146	56	0	0	83	66	63	47	10	11
Holy Cross	50	50	20	0	0	12	10	38	29	2	2
Leicester	3	3	1	0	0	0	0	3	2	0	0
UMass Med	2	0	0	2	1	0	0	0	0	2	2
Quinsig	0	0	0	0	0	0	0	0	0	0	0
Worc Fndtn	64	17	7	47	21	17	13	0	0	64	69
Worc Jr	1	1	0	0	0	1	1	0	0	0	0

(continued on next page)

WPI	16	13	5	3	1	10	6	3	2	2	2
Worc Pub	193	16	6	177	76	0	0	16	12	9	10
Worc State	2	2	1	0	0	2	2	0	0	0	0
Total	492	260	100	232	100	127	100	133	100	93	100

Table IV-D. Individual library lending. Percentages represent each library's portion of the total number of loans of each type.

most of the libraries do allow ILL renewals.

2. Borrowing

A total of 356 titles were reported as having been borrowed by WACL libraries during the survey period. Of these, 28 were borrowed by the Public Library for individual Regional System libraries in its capacity as a referral center for the System. The borrowing questionnaire was filled out at the time a request was initiated, and requests with negative results were to be later recorded as such on the same form. This proved to be something of a problem in some libraries, and positive indication of the actual results of requests are lacking in a few instances.

In our tabulation of the results we were able to distinguish between (a) requests that were definitely filled, (b) those that were probably filled, and those (c) that were either probably or definitely not filled. The totals given above are for (a) and (b) together.

Information on (c), unfilled requests, has been omitted from the study, because many (if not the majority) of such requests were made via the telephone and were thus not recorded (see Preliminary Remarks above for the reason). To deal with only the recorded unsuccessful searches for material would probably produce very biased and misleading

results. Turning to the tabular presentations of the data, we see in Table IV-E some reflections of the total activity. Notice particularly that 75% of the titles borrowed were from other WACL libraries, and that the greatest share (65%) of requests were from undergraduate students. Just over half (51%) of the items borrowed locally were delivered on the shuttle, consistent with what was found on the lending questionnaires. However, 38% of <u>all</u> borrowing, from WACL and non-WACL libraries alike, was carried out via the shuttle, compared to 29% in the case of lending. This reflects the fact that there was much more lending to non-WACL members (232) than there was borrowing from them (90).

Tables IV-F and IV-G give a library-by-library break-down of these figures, plus some percentages of each institution's total for some of the significant categories and the percentage of the grand total for each institution. Notice that the Public Library's own transactions are distinguished from those it carries out for the Regional System. Considering both together, the Public Library accounts for 10% of the borrowing. The small academic libraries (Anna Maria, Becker, Leicester, Quinsigamond, and Worcester Junior) account for another 15%. The single largest borrower was W.P.I., with 22% of the

	Total		From WACL libraries		From non-WACL libraries	
	Number	Percent	Number	Percent	Number	Percent
1. Total number of titles	356	100	266	75	90	25
2. Borrower status						
a) Undergraduate	232	66	212	60	20	6
b) Graduate	24	7	10	3	14	4
c) Faculty	44	12	23	6	21	6
d) Other	56	15	21	6	35	9
3. Delivery of WACL items						
a) Shuttle			137	38		
b) Other			129	36		

Table IV-E. Total borrowing activity during the survey period (including clearly-filled and probably-filled requests). Percentages are of the total number of requests. "Other" includes researchers, general public, and others.

	Total	From WACL		From non-WACL		Shuttle		Other (WACL)		Other (non-WACL)	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Amer Antiq	0	0	0	0	0	0	0	0	0	0	0
Anna Maria	24	24	100	0	0	19	79	5	21	0	0
Assumption	49	49	100	0	0	11	22	38	78	0	0
Becker	3	1	33	2	67	1	33	0	0	2	67
Clark	23	23	100	0	0	16	69	7	31	0	0
Holy Cross	71	48	68	23	32	28	40	20	28	23	32
Leicester	11	11	100	0	0	9	82	2	18	0	0
Quinsig	7	7	100	0	0	0	0	7	100	0	0
UMass Med	21	11	52	10	48	1	4	10	48	10	48
Worc Fndtn	7	0	0	7	100	0	0	0	0	7	100
Worc Jr	4	4	100	0	0	0	0	4	100	0	0

(continued on next page)

WPI	78	58	74	20	26	42	54	16	20	20	26
Worc Pub a) local	9	3	33	6	67	1	11	2	22	6	67
b) Region	28	7	25	21	75	0	0	7	25	21	75
Worc State	21	20	95	1	5	9	43	11	52	1	5

Table IV-F. Borrowing activity by institution. Percentages represent portion of <u>each</u> institution's borrowing that falls in each category.

	Total	Undergraduate	Graduate	Faculty	Other	Percentage for each library of total number of transactions
Amer Antiq	0	0	0	0	0	0
Anna Maria	24	24	0	0	0	7
Assumption	49	49	0	0	0	14
Becker	3	0	0	3	0	1
Clark	23	19	1	3	0	7
Holy Cross	71	63	0	5	3	20
Leicester	11	7	0	4	0	3
Quinsig	7	7	0	0	0	2
UMass Med	21	0	12	9	0	5
Worc Fndtn	7	0	0	0	7	2
Worc Jr	4	4	0	0	0	1

(continued on next page)

WPI	78	43	10	17	8	22
Worc Pub a) local	9	0	0	0	9	2
b) Region	28	0	0	0	28	8
Worc State	21	16	1	3	1	6

Table IV-G. Borrowing activity by institution, continued.

total. The three largest borrowers, W.P.I., Holy Cross, and Assumption, together account for 56% of the borrowing transactions.

The average elapsed time for material delivered by shuttle was 1.25 days, while that for material from outside WACL and delivered by mail was 7.03 days. There is good reason to believe that the latter figure is low, however. In any event, it is frequently much longer before the reader actually has the material in hand. The average number of libraries contacted in writing or by phone in order to locate a title was one -- most libraries did not record such contacts as having been made. (Frequently the borrower himself has visited the lending institution and is able to supply the call number).

3. Shuttle Returns

A separate questionnaire to be filled out for each item being returned to the library of ownership was included in the survey in order to give a full picture of shuttle use. Use of the shuttle for delivery of items being borrowed or lent was recorded on the borrowing and lending questionnaires (see above). It should be noted that materials returned on the shuttle had not necessarily been delivered via the shuttle when borrowed, or need not

have been borrowed through ILL at all: frequently books are returned to the wrong library, and the shuttle is utilized to get them back to the library of ownership. Specific questions were included on the shuttle returns form in order to determine the extent of these practices. Table IV-H shows the gross shuttle activity as derived from the shuttle records, not the survey results. These records show a total of 259 volumes having been carried during the survey period. Table IV-J shows the totals as derived from the survey results. These indicate that 233 to 237 titles were carried, of which 100 were items being returned. The discrepancy between the two sources of data may lie in the fact that one count is of physical volumes while the other is of titles. There is, nevertheless, some obvious error in the survey tally because the results from the lending forms do not agree exactly with the results from the borrowing forms. The difference is not a significant one, however.

Table IV-K gives a detailed breakdown of the survey results for returns. Interestingly, 30% of the items returned via the shuttle had not been borrowed via the shuttle: 15% had been picked up directly by the borrower and 15% had not been borrowed through ILL at all.

	Loans	Returns	Total
1. Books	117	112	229
2. Photocopies	14	1	15
3. Msc. Library Material	13	2	15
4. All Library Material	144	115	259
5. ILL Forms			240
6. Msc.			28
All Items			527

Table IV-H. Total shuttle activity during the survey period, from shuttle records.

	Loans	Returns	Total
All Library Material	133 (137)	100	233 (237)

Table IV-J. Total shuttle activity from survey results. Figures in parentheses are totals from borrowing forms; others are from lending forms, except for returns, which is from shuttle returns forms.

	Total Returns	Number of Items Picked up directly	Percentage	Amount not borrowed thru ILL	Percentage	Amount Overdue	Percentage
Amer Antiq	0	0	0	0	0	0	0
Anna Maria	19	0	0	0	0	0	0
Assumption	1	0	0	0	0	0	0
Becker Jr	2	0	0	0	0	0	0
Clark	4	0	0	0	0	0	0
Holy Cross	23	9	39	1	4	3	13
Leicester	15	4	26	5	33	0	0
Quinsig	0	0	0	0	0	0	0
UMass Med	5	0	0	3	60	3	60
Worc Fndtn	0	0	0	0	0	0	0
Worc Jr	3	0	0	0	0	2	66

(continued on next page)

WPI	13	0	0	0	0	0	0
Worc Pub	6	0	0	6	100	6	100
Worc State	9	2	22	0	0	2	22
Total	100	15	15	15	15	16	16

Table IV-K. Shuttle returns by institution. Percentages are of each institution's total number of returns.

4. Overall Network Activity

The above analyses do not make easily apparent the overall role of the WACL consortium within each library's ILL operation. Therefore, in an attempt to elucidate this very important consideration, several measures of network activity and dependence have been defined, using the raw data obtained during the survey.

The first such measure is of institutional consortium activity, figured as the ratio of local borrowing and lending to total borrowing and lending.* Table IV-L ranks the libraries in accordance with this measure. Those ranked highest, generally the smaller academic libraries, conduct most of their ILL activity within WACL, while those ranked lowest, the special libraries and the Public Library, carry out the majority of their ILL transactions with libraries outside of WACL. Table IV-M shows the same measure figured from the annual statistics reported by each library for the entire 1970-71 fiscal year. The correspondence between the two is very close, supporting the validity of the survey.

---

* $\frac{B_w + L_w}{B_a + L_a}$ where B_w is the amount of borrowing from other WACL libraries, L_w is the amount of lending to other WACL libraries, B_a is the amount of borrowing from all libraries, and L_a is the amount of lending to all libraries.

Anna Maria	1.00
Assumption	1.00
Clark	1.00
Leicester	1.00
Quinsig	1.00
Worc Jr	1.00
Worc State	.95
Holy Cross	.81
WPI	.75
Becker	.50
UMass Med	.48
Worc Fndtn	.24
Worc Pub	.11
Amer Antiq	0

Table IV-L. Institutional consortium activity from survey results. (See text for derivation.)

Leicester	1.00
Quinsig	1.00
Anna Maria	.95
Worc Jr	.94
Assumption	.93
Becker	.91
Worc State	.81
Holy Cross	.60
WPI	.53
Clark	.51
UMass Med	.14
Worc Fndtn	.10
Amer Antiq	.08
Worc Pub	inadequate data

Table IV-M. Institutional Consortium activity from 1970-71 annual statistics. (See text for derivation.)

The second measure utilized (Table IV-N) shows the dependency of each library upon the WACL network, and is expressed as the ratio of local borrowing to the sum of local borrowing and lending.* Thus a library that borrows more than it lends within the consortium will rank very high. Finally, we have a measure of shuttle dependency. This is figured as the ratio of lending and borrowing via the shuttle to all local lending and borrowing,* and is presented in Table IV-O. Notice that the two most distant academic libraries are quite dependent upon the shuttle and that the special libraries are not. The larger libraries all fall around the middle of the scale, indicating a significant utilization of the shuttle but without a great dependency upon it.

---

* $\frac{B_W}{L_W + B_W}$ where B_W is the amount of borrowing from WACL libraries, and L_W is the amount of lending to them.

* $\frac{B_S + L_S}{B_W + L_W}$ when B_S is the amount of borrowing via the shuttle, L_S is the amount of lending via the shuttle, B_W is the amount of borrowing from WACL libraries, and L_W is the amount of lending to WACL libraries.

Quinsig	1.00
Anna Maria	.96
Worc State	.91
UMass Med	.85
Assumption	.83
WPI	.82
Worc Jr	.80
Leicester	.78
Becker	.50
Holy Cross	.48
Worc Pub	.38
Clark	.14
Amer Antiq	.00
Worc Fndtn	.00

Table IV-N. Dependency upon WACL ILL network.

(See text).

Becker	1.00
Leicester	.86
Anna Maria	.80
Holy Cross	.67
Worc Pub	.65
WPI	.63
Clark	.47
Worc State	.41
Assumption	.32
UMass Med	.09
Amer Antiq	.00
Quinsig	.00
Worc Fndtn	.00
Worc Jr	.00

Table IV-O. Dependency upon shuttle. (See text.)

Summary of findings

The two-week survey did not produce any startling findings. It does give for the first time, however, detailed quantitative information on the ILL activities of WACL libraries. This information will serve as a base for detecting future changes in the patterns and extent of this activity, as well as for determining the cost of ILL.

Some of the more significant general findings can be summarized as follows: The majority of all ILL transactions (excluding returns) were made with other WACL libraries -- if the Public Library data is excluded, the percentage of activity which was purely with WACL rises to 80%. Most loans were of books, as opposed to other forms of library material, and were requested by undergraduates; comparatively few requests were made by faculty members. Lending to non-WACL members far exceeded borrowing from such libraries (reverse of annual figures). The shuttle was used for over a quarter of all borrowing and lending transactions, and for over half of all such intra-WACL transactions. Delivery time for items carried on the shuttle was nearly seven times as fast as that for items delivered through the mail (most of the latter were from outside the Worcester area). Nearly a third of all

items returned via the shuttle had not been borrowed through interlibrary loan.

V. Conclusions

1. Total ILL activity has decreased in 70-71 from the level of 69-70, largely because of fewer transactions at the Worcester Foundation and far fewer Regional System transactions at the Public Library.
2. Total ILL activity in the academic and research libraries has remained constant for the past two years.
3. Local ILL activity among WACL members has increased significantly each year since 68-69, with a very large jump upwards this past year. This increase is probably due to the shuttle service that was instituted in October, 1970. The majority of ILL transactions are local.
4. The Goddard Library at Clark University is the major resource library within WACL, as determined by the amount of interlibrary lending to other WACL libraries it is called upon to perform. It is also the largest borrower of the academic libraries.
5. Shuttle use increased during the year. This undoubtedly reflects the normally heavier use of ILL in the spring at the academic institutions,

but probably is also a result of increased awareness of the utility of the shuttle.

6. Borrowing and lending through ILL at individual libraries is positively correlated: if a library lends extensively it is quite likely that it also borrows extensively; if it lends few items it also borrows few.

7. Most loans are of books.

8. As a group, undergraduate students use ILL the heaviest.

9. The shuttle was used in over a quarter of <u>all</u> ILL transactions.

10. Average delivery time via the shuttle is 1.25 days, compared with over a week for items borrowed from outside WACL which were delivered via the mails.

11. A significant portion of items carried on the shuttle are returns of materials <u>not</u> borrowed through ILL.

12. The shuttle can be economically viable. The cost per loaned item for the shuttle was $1.61 (the cost per item carried, for all classes of materials, was $.48). This compares to a probable minimum cost of $3.20 for using the U.S. mails. Comparing the total cost of the shuttle with the probable

total cost of delivering the same volume of library materials by mail, we find that the shuttle has provided a savings of over $2,000.

VI. Recommendations

1. The shuttle service should be continued, with certain modifications. The base operation should be reduced in scope and the requirement for prior notification by a library of a pickup to be made should be abolished. Instead, the shuttle should stop at every library (except the three most distant ones: Leicester Junior, Anna Maria, and the Worcester Foundation) each day. This will reduce the amount of staff time spent on the telephone in each library and in the coordinating office. The three most distant libraries would still be required to call.

After a day's circuit has been completed, second stops at libraries which are indicated as destinations for material picked up since the first stop should be made (except to the three distant libraries, unless no stop had been made there that day). The most efficient route should be worked out with the shuttle driver.

These measures will increase mileage and driver cost by 25 to 40%, but will reduce coordinating office costs by nearly 80%. Additional savings will be made on staff time in each library. Ser-

vice will be enhanced, with more same-day delivered, and the fact that the driver would stop at each library daily without any action on the part of that library should serve as an added incentive for the librarian to tap the network resources.

2. As an extension of the above recommendation, serious consideration should be given to instituting Saturday shuttle service. Most requests made on Friday cannot be delivered until Monday at present, and a number of libraries could use a Saturday delivery to advantage. The scheduled route might not include all the libraries on the weekly route, and therefore the cost would not necessarily be as high for a Saturday run.

3. Better and more accurate means of maintaining shuttle statistics must be devised. A daily driver's report, with a check-off for each stop where the number of items delivered and picked up could be filled in, plus total mileage and time, and a weeky library report for each library, on which the amount of lending, and returning could be recorded, would be far superior to the present system.

4. WACL must try to devise ways of sharing the lending burden more evenly. Part of the next year's systems project time devoted to ILL should be spent on this matter. One means of doing this would be to develop new union lists of special materials.

5. Considering the number of shuttle returns of items that were not borrowed through ILL, there is obviously a great deal of non-ILL, cross-library borrowing, either directly or through friends. In light of this, WACL should consider extending the union borrowing scheme now in effect for faculty to graduate students. Neither of these groups make up a large proportion of the ILL users, however, and the impact on the shuttle operation would be minimal. Such a step would increase service to an important user group.

6. WACL should investigate installing one or more TELEX or TWX terminals in order to speed up non-WACL borrowing. A survey of Teletype use for ILL in New England and New York is underway, and the results will be reported in the Fall. Teletype communications has proven to be useful for ILL purposes in a number of locations.

VII. Appendices

Appendix I

THE WORCESTER AREA COOPERATING LIBRARIES

The Worcester Area Cooperating Libraries

The Worcester Area Cooperating Libraries, an interlibrary project sponsored by the Worcester Consortium for Higher Education, Inc., is composed of fourteen non-profit academic, special, and public libraries in or near Worcester, Massachusetts. Founded in 1967 as an informal organization dedicated to furthering cooperation among the member institutions, it became the initial activity of the Worcester Consortium when that organization was formed in 1968. The major policy-making and administrative body of WACL is a committee of the respective head librarians or their appointed delegates. The Consortium, through its executive director, serves as fiscal administrator.

Actual cooperative undertakings are performed by sub-committees. The major activities to date include a new Worcester Area Union List of Serials (which includes holdings of several local special libraries not members of WACL), the operation of a daily inter-library loan shuttle service among the member libraries, cooperative purchasing of certain library supplies, and a major systems project, for which the Consortium hired, in the fall of 1970, a full-time library systems analyst.

The systems project centers upon the libraries of the five larger four-year academic institutions, and involves work simplification efforts and the possible design and implementation of cooperative, computer-based processing systems.

Funding for these activities has been achieved through allocations from several of the member institutions and grants from outside agencies.

Goals

1. Promote the goals of the member libraries and their parent institutions.

2. Provide an institutional framework for inter-library cooperation in pursuit of these goals.

3. Supplement the resources of each member library by making available to its clientele the resources of the other member libraries.

4. Provide for specialization among libraries for certain subject areas.

5. Avoid needless duplication of resources.

6. Share experience and expertise.

7. Promote economy of operation.

8. Evaluate new services and techniques that might be of use to the member libraries individually or as a group.

9. Design and implement more efficient systems for handling bibliographic materials and information.

10. Obtain funding for these activities.

Membership

The WACL libraries together constitute the major library resource of Central Massachusetts, with combined holdings of two and one half million volumes. These holdings range from several small, general collections to a number of superb research collections. The following are the participating institutions:

	Approximate holdings in volumes
American Antiquarian Society	750,000
Anna Maria College	35,000
Assumption College	120,000
Becker Junior College	15,000
Clark University	283,000
College of the Holy Cross	275,000
Leicester Junior College	19,000
University of Massachusetts Medical School	40,000
Quinsigamond Community College	24,000
Worcester Foundation for Experimental Biology	10,000
Worcester Junior College	24,000
Worcester Polytechnic Institute	123,000
Worcester Public Library	721,000
Worcester State College	80,000

Appendix II

WACL INTERLIBRARY LOAN POLICY

Worcester Area Cooperating Libraries
January 27, 1971

WACL Inter-Library Loan Policy

The primary purpose of the area inter-library loan service is to aid research, instruction, and learning by allowing the clientele of any one member library to draw upon the additional resources of the other member libraries. The library shuttle service is meant to facilitate this sharing of resources.

The following rules are intended to eliminate ambiguities and possible confusion in the transaction of inter-library loans and to provide maximum benefit at minimum cost to the participating libraries and WACL.

A. Loan Policy

1. The lending library determines the material to be loaned and any restrictions as to use.

2. An ALA inter-library loan form must be used for each item requested.

3. Monographic materials will be loaned for 2 weeks, unless qualified by the lending library. Included within this period must be adequate time to return the material to the lending library.

4. Loans of monographic materials are renewable (in writing or by telephone) for an additional 2 week period, unless qualified by the lending library.

5. Bound journals may be loaned at the discretion of the lending library.

6. Monographic materials may be borrowed through inter-library loan directly by the user, provided he has an ILL form signed by a librarian at his own institution. The borrowing library form sections are to be returned by shuttle.

7. Fines may be collected for overdue material by the borrowing library at the rate it normally charges for its own material. Any monies so collected, however, may be forwarded to the lending library on a monthly or quarterly basis.

8. WACL will publish regularly a directory of inter-library loan personnel and a list of the hours during which direct inter-library loans may be transacted at each institution.

9. It is the responsibility of the borrowing library to make all contacts with the user including recovering overdue books and renewing loans for the user. The user will not be contacted in deliquent or renewal situations by the lending library.

10. Books borrowed through inter-library loan but picked up directly by the user may be returned via the shuttle.

11. The borrowing library assumes responsibility for carrying out the above rules.

12. The borrowing library assumes responsibility for any material that is lost while on loan from the lending library.

13. Each library must maintain its own records of inter-library loan transactions.

14. The availability of the shuttle service and its utility should be publicized by each library.

B. Photocopying Policy

1. Articles from journals, bound, unbound, or on microfilm and certain other materials may be obtained in photocopy form, at the discretion of the library owning the material.

2. An ALA inter-library loan form or a photocopy request form must be submitted for each item requested.

3. A single copy only is to be made for each request.

4. A standard charge of 10¢ per page should be made to the user for copying requested through another library.

5. Billing of photocopying charges may be carried out on a monthly or quarterly basis.

C. Shuttle Operations Policy

1. The shuttle service will operate 5 days a week, Monday through Friday.

2. The driver will depart from the base library at 9:30 A.M. and will service all transactions of which the base has been notified prior to that time.

3. Four classes of material will be carried:

   a. Library materials
   b. request forms
   c. photocopies
   d. messages

4. Libraries having material to be transferred via the shuttle must call the shuttle base by 9:30 A.M. and clearly specify the class(es) of material, the number of items of each class (i.e. the actual number of volumes, request forms, etc.), and the destination library of each. *

5. Material of which the shuttle base has not been informed will be picked up, but delivery the same day is not guaranteed.

6. Phone calls to the base may be placed between 9-12 and 1-4, Mondays through Fridays.

7. Special stops will not be made to pick up or deliver items in the "message" class, unless such service is requested by a head librarian for a particular item. Messages will thus be carried on a stand-by basis only.

8. If a special trip would be required to deliver the request form, the delivery of a book to a borrowing library may precede the delivery of the request form to the lending library by 24 hours.

9. The shuttle driver will not carry monies.

10. A daily log indicating the types of materials carried and their quantity, origin, and destination will be maintained at the base library.

* Assumption College, Clark University, Worcester Public Library, Worcester State College, and Worcester Polytechnic Institute need not call the base now.(11/1/71).

Appendix III

AMERICAN ANTIQUARIAN SOCIETY ILL POLICY

FOUNDED 1812

American Antiquarian Society

185 SALISBURY STREET
WORCESTER, MASSACHUSETTS 01609, U. S. A.

INTER-LIBRARY LOAN AND THE AMERICAN ANTIQUARIAN SOCIETY

Because the library of the American Antiquarian Society contains a selective collection of unique and irreplaceable volumes, inter-library lending policy is of necessity restrictive.

At the core of this collection of Americana are the Early American Imprints, which consist of books, pamphlets, broadsides, documents and other printed items of the period 1640-1820. Many of these volumes are similar to those held in the rare book collections of college and university libraries. The remainder of the collection includes books, pamphlets, genealogies, documents, serials, manuscripts and newspapers which support the scholarly use and study of the Early American Imprints. The great value of the Library of the Society rests not only on the extent of the collection, but also on the fact that all of the original source materials as well as the supporting items are collected and are available for use in one place.

Faculty members of Colleges and Universities are always welcome to use the Reading Room of the Society as they examine the collection at their leisure. If there is a title from recent monographic literature which is not available from any other source, the American Antiquarian Society will lend it on inter-library loan for a period of two weeks.

The Early American Imprints as well as many of the collected newspapers have been reproduced on microcards by Readex Microprint Corporation which makes them readily available at subscribing libraries. The rare books, reference books, bibliographies, genealogies, local histories, and first editions are not available on loan but are always available for consultation and use in the Library.

Inter-Library Loan Department

C. WALLER BARRETT, PRESIDENT
A. GEORGE BULLOCK, TREASURER
MARCUS A. McCORISON, DIRECTOR AND LIBRARIAN
JAMES E. MOONEY, EDITOR
ELLIOTT B. KNOWLTON, DEVELOPMENT OFFICER

Appendix IV

ILL SURVEY FORMS AND INSTRUCTIONS

(A)

Worcester Area Cooperating Libraries
April 19, 1971

Interlibrary Loan Survey: Instruciton Sheet for Filling Out

Questionnaire A -- LENDING TRANSACTIONS

To be filled out for each title that is requested of you by other libraries through interlibrary loan. This form should be filled out even if the request is denied. If a specific request includes more than one title, fill out a separate form for each title.

IMPORTANT: 1) Please write the name of your library (use abbreviation) and the date at the top of the questionnaire -- spaces for this information were inadvertently omitted from the final version of the form. 2) Also, if the ILL request originates in a WACL library, please copy the survey transaction number from the regular ILL request form (or ask for the number on the phone) onto this form in the space provided (at the upper right part of the form).

Each of the following numbered instructions refers to the questionnaire item of the corresponding number:

1) Self-explanatory
2) Please indicate type of material even if photocopies are sent rather than the original.
3) For multiple-volume titles only.
4) Includes copies made on a reader-printer.
5) Check box if this is a request for renewal of an existing interlibrary loan. If the request for renewal is denied, indicate the reason in question #7.
6) Check box if the patron presents the ILL form and picks up the material in person.
7) Self-explanatory.
8) Only those libraries that place holds on materials for ILL should answer this question.
9) Self-explanatory.

If there are any ambiguities or other problems in filling out the form, please call Ray DeBuse at 753-1411, ext 466, or the Gordon Library Reference Desk.

(A)

Worcester Area Cooperating Libraries
Interlibrary Loan Survey

LENDING TRANSACTION #_____

1. Name of library requesting item:

_____

2. Type of material:
   - ☐ Book
   - ☐ Bound Periodical
   - ☐ Unbound Periodical
   - ☐ Microform
   - ☐ Other (please specify):

     _____

3. Number of physical volumes, if more than one(please circle):

   2 3 4 5 5+

4. ☐ Photocopies made.
   Number of exposures:____

5. ☐ Renewal.

6. ☐ Direct ILL within WACL.
   (item picked up by the patron)?

7. If request is denied, please indicate reason:
   - ☐ Item is non-circulating
   - ☐ Item is on reserve
   - ☐ Item is out (If hold placed, question #8)
   - ☐ Item is needed locally
   - ☐ Item is missing
   - ☐ Other:

     _____

8. Hold placed:
   - ☐ In use
   - ☐ On order
   - ☐ In process

9. ☐ Is the item being lent before the ILL form has been received from the borrowing library?

(B)

Worcester Area Cooperating Libraries
April 19, 1971

Interlibrary Loan Survey: Instruction Sheet for Filling Out

Questionnaire B -- BORROWING TRANSACTION

To be filled out for each title that is requested thru ILL from any library (not just WACL members). If a specific request includes more than one title, fill out additional forms for the others.

IMPORTANT: 1) Please write the name of your library (use abbreviation) and the date at the top of the questinnaire -- spaces for this information were inadvertently omitted from the final version of the form. 2) Also, please copy the pre-assigned transaction number (upper right part of the form) onto the regular ILL request form.

The following numbered instructions refer to the questionnaire items with corresponding numbers:

1) Please ask the person requesting the title his status and check the appropriate box.
2) Self-explanatory.
3) Self-explanatory.
4) "Contacted" means "communicated with" by any means.
5) If the item is located in more than one library, name all but circle the one from which the item is actually being requested. Also indicate if the item is currently unobtainable from any of the other libraries listed. If located in only one library write in the name of that library.
6) Self-explanatory.
7) This item must be filled out at the time the material is actually delivered. If the patron himself is picking up the material, write "direct" in the space for time. When the material is delivered you can find the appropriate questionnaire form by matching transaction numbers.

If there are any ambiguities or other problems in filling out the form, please call Ray DeBuse at 753-1411, ext 466, or the Gordon Library Reference Desk.

(B)

Worcester Area Cooperating Libraries
Interlibrary Loan Survey

BORROWING TRANSACTION #_____

1. Status of patron making request:
   - ☐ Undergraduate student
   - ☐ Graduate student
   - ☐ Faculty member
   - ☐ Researcher
   - ☐ General public
   - ☐ Other (please specify)

   _____

2. Type of material:
   - ☐ Book
   - ☐ Periodical
   - ☐ Microform
   - ☐ Other (please specify)

   _____

3. Item located in a catalog or union list?
   - ☐ Worcester Area Union List of Serials
   - ☐ NUC
   - ☐ Other:

   _____

4. How many libraries contacted before item located (please circle):

   0 1 2 3 4 5 6 7 8 9 10 10+

5. Name of library in which item was located:

   _____

6. If located in a WACL library:
   - ☐ Requested delivery via shuttle
   - ☐ ILL form given directly to patron
   - ☐ Mailed to CMRLS Library (for Public Library only)

7. How many hours (or days) elapsed between time when patron requested item and the time of its delivery from the lending institution?

   _____hrs.

   or

   _____days

(C)

Worcester Area Cooperating Libraries
April 19, 1971

Interlibrary Loan Survey: Instruction Sheet for Filling Out

Questionnaire C -- SHUTTLE RETURNS

To be filled out for each title returned to the lending library via the WACL shuttle.

IMPORTANT: Please write the name of your library (use abbreviation) and the date at the top of the questionnaire -- spaces for this information were inadvertently omitted from the final version of the form.

Each of the following numbered instructions refers to the questionnaire item of the corresponding number:

1) Estimate the time the patron kept the material if the exact time (in days) is not known.
2) Has the due date set by the lending library been exceded?
3) Self-explanatory.
4) Self-explanatory.
5) Number of physical volumes of one title.
6) Check box if it is known that patron picked up the material directly from the lending library.
7) Self-explanatory.

If there are any ambiguities or other problems in filling out the form, please call Ray DeBuse at 753-1411, ext 466, or the Gordon Library Reference Desk.

(C)

Worcester Area Cooperating Libraries
Interlibrary Loan Survey

SHUTTLE RETURNS #_____

1. How many days did patron keep the item:

_____

2. ☐ Is it overdue? If so, how long:

_____

3. ☐ Was the item renewed before being returned?

4. Type of material:
   - ☐ Book
   - ☐ Bound Periodical
   - ☐ Unbound Periodical
   - ☐ Microform
   - ☐ Other:

_____

5. Number of physical volumes if more than one(please circle):

   2 3 4 5 5+

6. ☐ Was the item picked up directly by the patron when it was borrowed?

7. ☐ Was the item <u>not</u> borrowed through interlibrary loan?

Appendix V

REVISED ILL SURVEY FORM

Library _____
Date _____
ID # _____

Worcester Area Cooperating Libraries
Interlibrary Loan Survey

I. GENERAL (answer for all transactions)

A. Type of transaction:
1. ☐ Borrowing, from _____
2. ☐ Lending, to _____
3. ☐ Shuttle return, to _____

B. Transportation utilized:
4. ☐ Shuttle
5. ☐ Picked up in person by reader
6. ☐ Mail 7. ☐ CMRLS (for Pub. Library)

C. Type of material:
8. ☐ Book
9. ☐ Bound Periodical
10. ☐ Unbound Periodical
11. ☐ Microform: _____
12. ☐ Other: _____

D. Number of physical volumes (if more than one): 2 3 4 5 +

****

I. BORROWING TRANSACTIONS

E. Status of person making request:
13. ☐ Undergraduate
14. ☐ Graduate Student
15. ☐ Faculty
16. ☐ Other: _____

F. Union List or special catalog used to locate item:
17. ☐ Worcester Area Union List
18. ☐ ULS
19. ☐ NUC
20. ☐ Other: _____

G. Number of libraries contacted (by phone or mail) before item located:
1 2 3 4 5 6 7 8 9 +

H. Time elapsed between request by reader and delivery from the lending institution: _____ hours, or _____ days.

****

I. LENDING TRANSACTIONS

21. ☐ Renewal
22. ☐ Photocopies made
23. ☐ Item sent out before ILL request form received.
24. ☐ Hold placed
25. Number of exposures _____

(continued on reverse)

V. SHUTTLE RETURNS

26. How many days did borrower keep the item_____

27. ☐ Item was picked up in person from the lending library on ILL.

28. ☐ Item was not borrowed through ILL.